

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	19022
<b>Description:</b> Bracket Assembly	<b>Part Number:</b>	D3183-041 x4 D3183-042 x5
<b>Dwg:</b> D3183 Rev. A page 1, 2, 4	<b>Qty:</b>	4 + 5 Kits
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty																				
1	DC	Issue Traveler	HA	03.04.14	1																				
2	MV	Cut (1) blank per D3183-041 & (1) blank per D3183-042 Cut blanks (2.00" x 1.50") x 4.30" Long Bar Material: 17-4 SS per AMS 5604/5643 (M17-4-B2.000x01.500) Batch: M13087	BE	03.04.14	8																				
3	MV	Machine D3183-1 as per Folio FA320 and Dwg D3183	BE	03.04.21	8																				
4	QC2	Inspect parts as they come off the CNC machine	BE	03.04.22	8																				
5	MV	Machine D3183-2 as per Folio FA320 and Dwg D3183	BE	03.04.15	8																				
6	QC2	Inspect parts as they come off the CNC machine	BE	03.04.15	8																				
7	MV	Deburr Break all sharp edges 0.005 to 0.015	BE	03.04.22	8																				
8	MV	Scribe batch number to D3183-1 & D3183-2 as per Dwg D3183	BE	03.04.22	8																				
9	QC5	Second check D3183-1 and D3183-2	HB	03.04.23	8																				
10	GA	Assemble D3183-041 as per Dwg D3183 <b>Pick:</b> <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>D3121-17</td><td>Washer</td><td>M10536-17</td></tr><tr><td>4</td><td>D3183-5</td><td>Bearing</td><td>M18988</td></tr><tr><td>2</td><td>D3183-7</td><td>Washer</td><td>B18987</td></tr><tr><td>2</td><td>MS24694-S50</td><td>Screw</td><td>M11548</td></tr></table>	Qty	Part Number	Description	Batch	2	D3121-17	Washer	M10536-17	4	D3183-5	Bearing	M18988	2	D3183-7	Washer	B18987	2	MS24694-S50	Screw	M11548	SB	03.04.23	8
Qty	Part Number	Description	Batch																						
2	D3121-17	Washer	M10536-17																						
4	D3183-5	Bearing	M18988																						
2	D3183-7	Washer	B18987																						
2	MS24694-S50	Screw	M11548																						
11	GA	Assemble D3183-042 as per Dwg D3183 <b>Pick:</b> <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>D3121-17</td><td>Washer</td><td>M10536-17</td></tr><tr><td>4</td><td>D3183-5</td><td>Bearing</td><td>M18988</td></tr><tr><td>2</td><td>D3183-7</td><td>Washer</td><td>B18987</td></tr><tr><td>2</td><td>MS24694-S50</td><td>Screw</td><td>M11548</td></tr></table>	Qty	Part Number	Description	Batch	2	D3121-17	Washer	M10536-17	4	D3183-5	Bearing	M18988	2	D3183-7	Washer	B18987	2	MS24694-S50	Screw	M11548	SB	03.04.23	8
Qty	Part Number	Description	Batch																						
2	D3121-17	Washer	M10536-17																						
4	D3183-5	Bearing	M18988																						
2	D3183-7	Washer	B18987																						
2	MS24694-S50	Screw	M11548																						
12	QC5	Inspect work to Step 10 & 11	HB	03.04.23	8																				
13	ST	Identify and Stock in Spacedoor cell D3183-041 Qty 4 D3183-042 Qty 4	HB	03.04.23	8																				
14	AC	Parts to Stock and Prorate Cost to parts per Step 13 Cost / part 287.56 287.56 150.70 / 150.70	SAC	03.04.24	8																				
15	DC	Close W/O 259.91 322.08 Inspect Level 21	HA	03.05.01	-																				

Rev	Date	Change	Revised By	Approved
A	03.03.28	New issue	KJ/RF	HA

Work Order:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Manuf / Design Mgr	Approval QC Inspector

NCR		WORK ORDER NON-CONFORMANCE						
DATE	STEP	Description of NC section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial					

PAR#: \_\_\_\_\_ Fault Category: \_\_\_\_\_ DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**NOTE:** Date & initial all entries  
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QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

16

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	19022 A
<b>Description:</b> Bracket Assembly		<b>Part Number:</b>	<del>D3183-041</del> D3183-042
<b>Dwg:</b> D3183 Rev. A page 1, 2, 4		<b>Qty:</b>	5 Kits
		Page 1 of 1	

Step	Location	Procedure	By	Date	Qty																				
1	DC	Issue Traveler	HJ	03.04.14	1																				
2	MV	Cut (1) blank per D3183-041 & (1) blank per D3183-042 Cut blanks (2.00" x 1.50") x 4.30" Long Bar Material: 17-4 SS per AMS 5604/5643 (M17-4-B2.000x01.500) Batch: M13087	ML	03/04/14	1																				
3	MV	Machine D3183-1 as per Folio FA320 and Dwg D3183	EC	03.04.15	1																				
4	QC2	Inspect parts as they come off the CNC machine	EC	03.04.																					
5	MV	Machine D3183-2 as per Folio FA320 and Dwg D3183 D3183-7 m. 1642	EC	03.04.15	1																				
6	QC2	Inspect parts as they come off the CNC machine	EC	03.04.15	1																				
7	MV	Deburr Break all sharp edges 0.005 to 0.015	EC	03.04.15	1																				
8	MV	Scribe batch number to D3183-1 & D3183-2 as per Dwg D3183	EC	03.04.15	1																				
9	QC5	Second check D3183-1 and D3183-2	ML	03.04.15	1																				
10	GA	Assemble D3183-041 as per Dwg D3183 Pick: 042 <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>D3121-17</td><td>Washer</td><td>M10530-17</td></tr><tr><td>4</td><td>D3183-5</td><td>Bearing</td><td>M18982</td></tr><tr><td>2</td><td>D3183-7</td><td>Washer</td><td>M18987</td></tr><tr><td>2</td><td>MS24694-S50</td><td>Screw</td><td>M11545</td></tr></table>	Qty	Part Number	Description	Batch	2	D3121-17	Washer	M10530-17	4	D3183-5	Bearing	M18982	2	D3183-7	Washer	M18987	2	MS24694-S50	Screw	M11545	EC	03.04.15	1
Qty	Part Number	Description	Batch																						
2	D3121-17	Washer	M10530-17																						
4	D3183-5	Bearing	M18982																						
2	D3183-7	Washer	M18987																						
2	MS24694-S50	Screw	M11545																						
11	GA	Assemble D3183-042 as per Dwg D3183 Pick: <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>2</td><td>D3121-17</td><td>Washer</td><td></td></tr><tr><td>4</td><td>D3183-5</td><td>Bearing</td><td></td></tr><tr><td>2</td><td>D3183-7</td><td>Washer</td><td></td></tr><tr><td>2</td><td>MS24694-S50</td><td>Screw</td><td></td></tr></table>	Qty	Part Number	Description	Batch	2	D3121-17	Washer		4	D3183-5	Bearing		2	D3183-7	Washer		2	MS24694-S50	Screw		NOT Required for this kit		
Qty	Part Number	Description	Batch																						
2	D3121-17	Washer																							
4	D3183-5	Bearing																							
2	D3183-7	Washer																							
2	MS24694-S50	Screw																							
12	QC5	Inspect work to Step 10 & 11 PER JB Attached	ML	03.04.15	1																				
13	ST	Identify and Stock in Spacedoor cell D3183-041 Qty PIS. D3183-042 Qty	N/A																						
14	AC	Parts to Stock and Prorate Cost to parts per Step 13 Cost / part	See man																						
15	DC	Close W/O Inspect Level 21	W/O.																						

Rev	Date	Change	Revised By	Approved
A	03.03.28	New issue	KJ/RF	

Work Order:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Manuf / Design Mgr	Approval QC Inspector

NCR		WORK ORDER NON-CONFORMANCE						
DATE	STEP	Description of NC section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial					

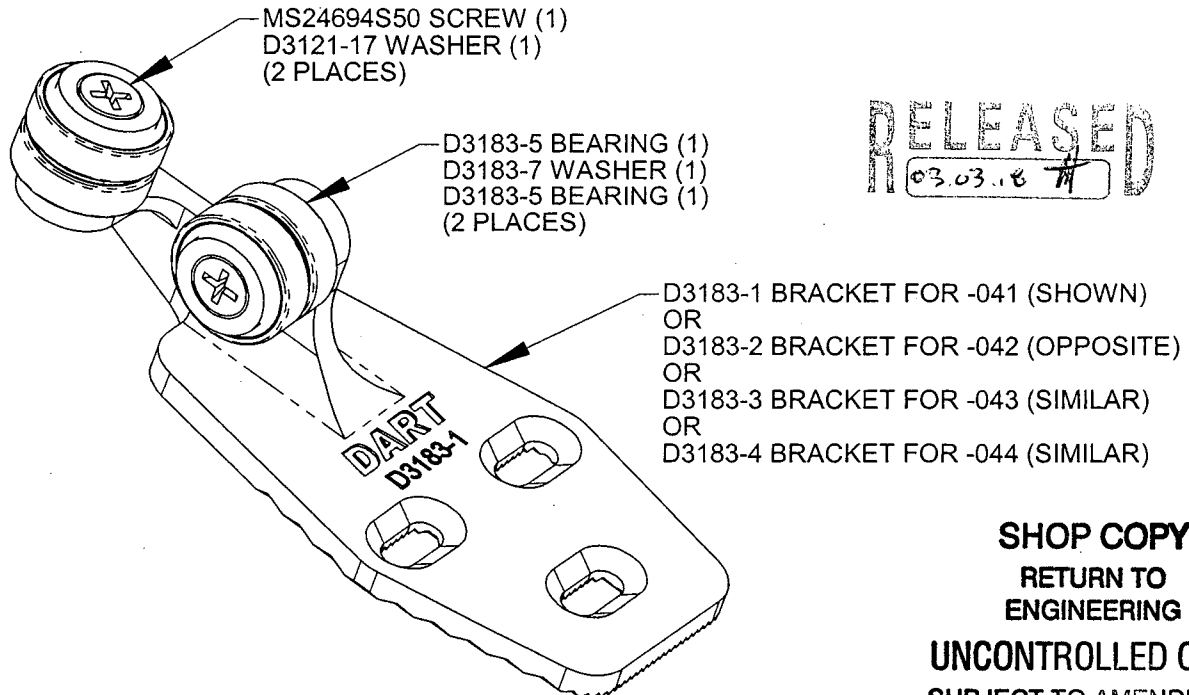
PAR#: \_\_\_\_\_ Fault Category: \_\_\_\_\_ DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**NOTE:** Date & initial all entries  
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QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



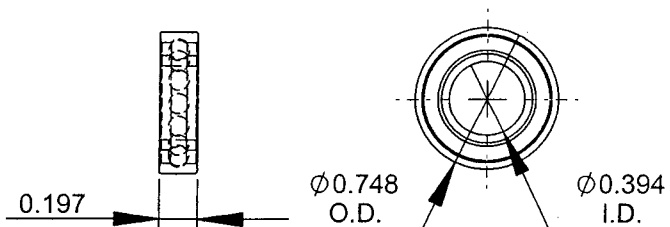
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CHECKED H	APPROVED H	DRAWING NO. <b>D3183</b>	REV. A SHEET 1 OF 4
DATE <b>03.01.24</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1
A	03.01.24	NEW ISSUE	



**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**

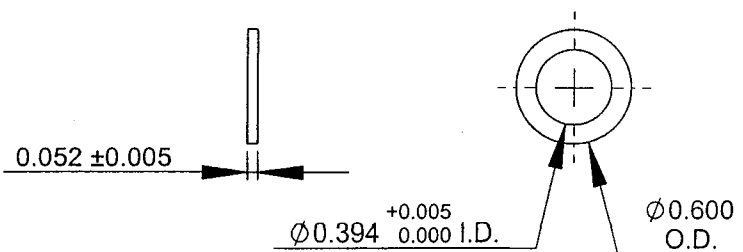
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**WORK ORDER**  
**NO. 19022**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

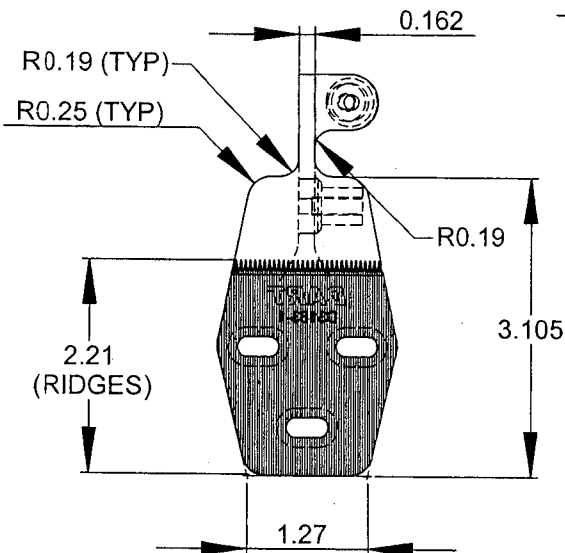
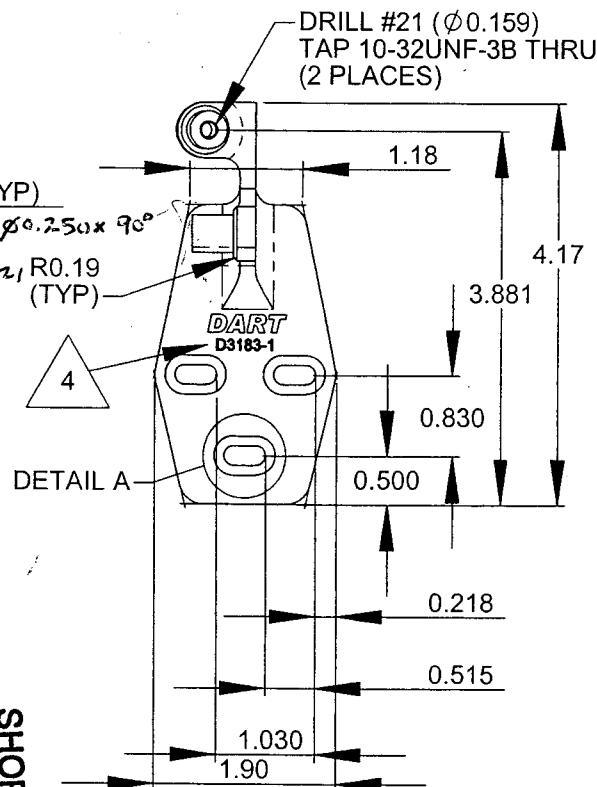
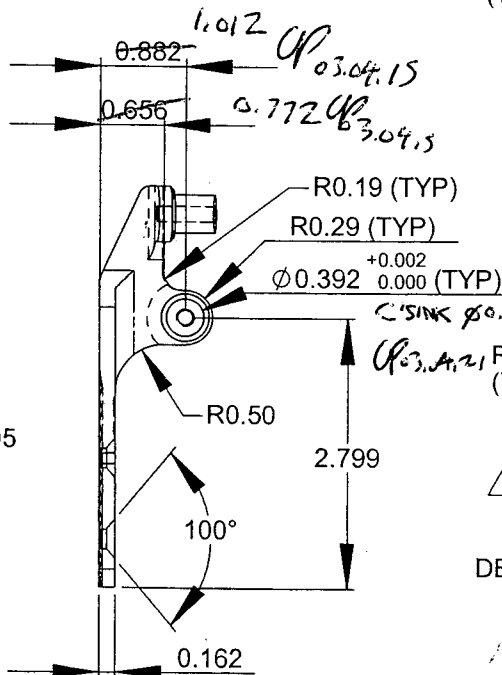
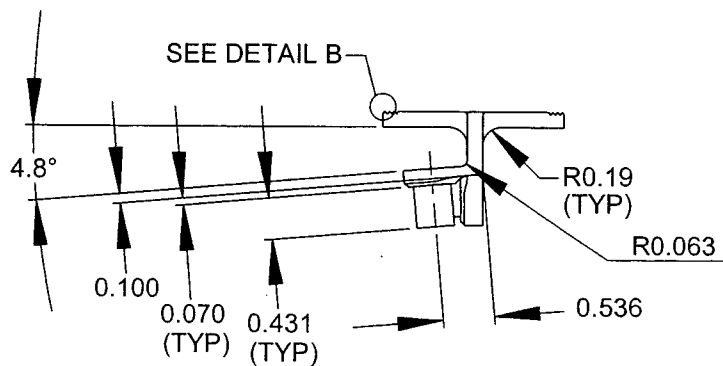
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**DART**

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CHECKED	✓	APPROVED	✓	HAWKESBURY, ONTARIO, CANADA
DATE	03.01.24	DRAWING NO.	D3183	REV. A
		TITLE	BRACKET ASSEMBLY	SHEET 2 OF 4
		SCALE	1:2	



**D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 96 ksi  
MIN YIELD STRENGTH = 64 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

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WORK ORDER  
NO. 19022**

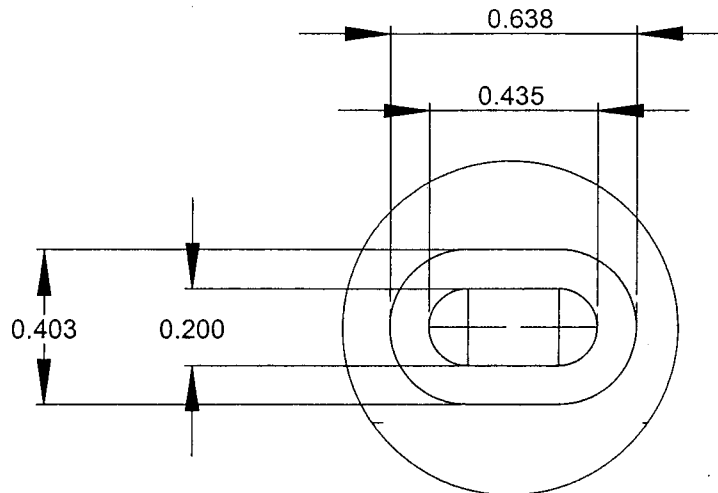
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DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3183	REV. A SHEET 4 OF 4
DATE 03.01.24		TITLE BRACKET ASSEMBLY	SCALE 1:1



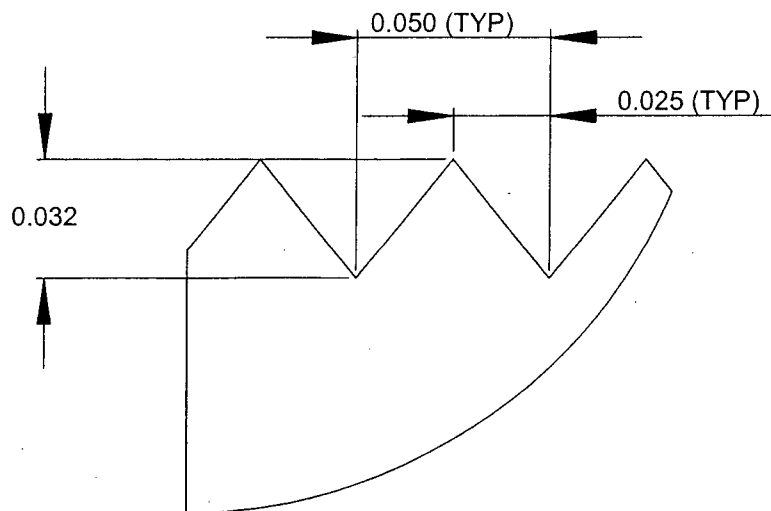
DETAIL A (2 : 1)

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WORK ORDER

NO. 19022



DETAIL B (20 : 1)

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03.03.10 *[Signature]*

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# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Apr 14, 2003  
02:08 pm

Work Order No	: 0019022	Department Code:	
Project Name	: D3183-2042	Burden Flags	: NNNNNNNN
Project For	: wk316	WO Status	: Open
Work Order Type	: Main	Invoice State	: Not Invoiced
Main WO Number	:	Invoice Date	:
House Part Number	: D3183-2	Invoice Number	:
Description	: Bracket	Invoice Amount	: 0.00
Manufactured	: Yes		
Amount Req'd	: 1	Order Entry No	:
Amount Done	: 0	OE Value	: 0.00
Start Date	: 04-14-03		
Est Finish Date	: 04-15-03	Est Margin	: 0.000%
Act Finish Date	:	Actual Margin	: 0.000%
Drawings Req'd	: No		
Ok for Approval	:		
Approval Rec'd	:	\$0 Posted to Finished Goods	

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	: 0.00	0.00	0.00	0.00	0.00
Engineering Hours	: 0.00	0.00	0.00		
Engineering Cost	: 0.00	0.00	0.00	0.00	0.00
Production Hours	: 0.00	0.00	0.00		
Production Cost	: 0.00	0.00	0.00	0.00	0.00
Testing Hours	: 0.00	0.00	0.00		
Testing Cost	: 0.00	0.00	0.00	0.00	0.00
OverHead Hours	: 0.00	0.00	0.00		
OverHead Cost	: 0.00	0.00	0.00	0.00	0.00
SubContract Hours	: 0.00	0.00	0.00		
SubContract	: 0.00	0.00	0.00	0.00	0.00
Misc. Hours	: 0.00	0.00	0.00		
Misc.	: 0.00	0.00	0.00	0.00	0.00
Burden	: 0.00	0.00	0.00		
Total Cost	: 0.00	0.00	0.00		
Margin	: 0.000	0.000			
Selling Cost	: 0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	: 0.00	0.00
Profits/(Loss)	: 0.00	0.00





Dart Aerospace, Ltd

1270 Aberdeen Street

Hawksbury, Ontario

K6A 1K7

Tel: (613) 632-3336 Fax: (613) 632-4443

Supplier Code: \_\_\_\_\_ Sheet 1 of 2

## INSPECTION CHECKLIST

PART NO.: D3183-042

PHY. CHANGE: \_\_\_\_\_

DESCRIPTION: Bracket

DRAWING CHANGE: Rev. A

MANUFACTURING DATE: 03-04-15

UNICORP E.O.'S: \_\_\_\_\_

BATCH NO.: 19022

SERIAL NO.: \_\_\_\_\_

PURCHASE ORDER NO.: \_\_\_\_\_

QUANTITY ACPT. 1 REJ. \_\_\_\_\_

DATA SHEET NO.: \_\_\_\_\_

☒ FIRST ARTICLE ☐ PERIODIC CONFORMITY ☐ FINAL INSPECTION

ITEM	DWG PAGE	DRAWING DIMENSION	TOL.	ACTUAL DIMENSION	ACC.	REJ.	% OF INSP.	Method of Inspection	Comments
1	2	0.100	±0.01	0.110	✓				
		0.070	"	0.073	✓				
		0.431	"	0.432	✓				
		R.063	"	R.063	✓				
		R.0.190	"	R.158	✓				
<hr/>									
1		0.162	±0.01	0.155	✓				
		R.190	"	R.188	✓				
		R.250	"	R.250	✓				
		2.21	±0.03	2.21	✓				
		1.27	"	1.270	✓				
		3.105	±0.01	3.106	✓				
		R.190	"	R.188	✓				
<hr/>									
1		0.882	±0.01	1.013		✓			OK, design change (1.012)
		0.656	"	0.780		✓			OK, design change (0.772)
		0.162	"	0.166	✓				CP
		2.799	"	2.803	✓				
		R.50	±0.03	R.50	✓				
		Ø 0.392	±0.02 0.000	Ø 0.393	✓				
		R.29	±0.03	R.392	✓				
		R.19	"	R.188	✓				
<hr/>									
1		1.90	±0.03	1.90	✓				
		1.036	±0.01	1.036	✓				
		0.218	"	0.219	✓				
		0.500	"	0.498	✓				
		0.830	"	0.830	✓				
		3.881	"	3.887	✓				
		4.17	±0.03	4.169	✓				

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Rev. B

Mesured by: EE

Audited by: JP 03-04-15

Approved by: CP 03-04-15

**Dart Aerospace, Ltd**

1270 Aberdeen Street

Hawksbury, Ontario

K6A 1K7

**Tel: (613) 632-3336 Fax: (613) 632-4443**

Supplier Code: N/A Sheet 2 of 2

## INSPECTION CHECKLIST

PART NO.: 03183-042

PHY. CHANGE:                     

DESCRIPTION: Bracket

DRAWING CHANGE: Rev. A

MANUFACTURING DATE: 03-04-15

UNICORP E.O.'S:

BATCH NO.: 19022

SERIAL NO.: \_\_\_\_\_

PURCHASE ORDER NO.:

QUANTITY ACCPT. ( REJ.

DATA SHEET NO.: \_\_\_\_\_

☒ FIRST ARTICLE

□ PERIODIC CONFORMITY

## □ FINAL INSPECTION

[illegible]

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Rev. B

Mesured by: EL

Audited by: M 03.04.15

Approved by: Y 03.04.15



Dart Aerospace, Ltd  
1270 Aberdeen Street  
Hawksbury, Ontario  
K6A 1K7  
Tel: (613) 632-3336 Fax: (613) 632-4443

Supplier Code: \_\_\_\_\_ Sheet 1 of 2

## INSPECTION CHECKLIST

PART NO.: D3183 - ~~042~~ 041

PHY. CHANGE: \_\_\_\_\_

DESCRIPTION: Bracket

DRAWING CHANGE: Rev. A

MANUFACTURING DATE: 03-04-28

UNICORP E.O.'S: \_\_\_\_\_

BATCH NO.: 19022

SERIAL NO.: \_\_\_\_\_

PURCHASE ORDER NO.: \_\_\_\_\_

QUANTITY ACPT. 1 REJ. \_\_\_\_\_

DATA SHEET NO.: \_\_\_\_\_

☒ FIRST ARTICLE    ☐ PERIODIC CONFORMITY    ☐ FINAL INSPECTION

ITEM	DWG PAGE	DRAWING DIMENSION	TOL.	ACTUAL DIMENSION	ACC.	REJ.	% OF INSP.	Method of Inspection	Comments
1	2	0.100	±0.01	0.105	✓				
		0.070	"	0.071	✓				
		0.431	"	0.433	✓				
		R0.063	"	R.063	✓				
		R0.190	"	R.188	✓				
1		0.1102	±0.01	0.156	✓				
		R.190	"	R.188	✓				
		R.250	"	R.250	✓				
		2.21	±0.03	2.20	✓				
		1.27	"	1.30	✓				
		3.105	±0.01	3.105	✓				
		R.190	"	R.188	✓				
1		1.012 <del>0.882</del>	±0.01	0.020	✓				
		0.772 <del>0.650</del>	"	0.780	✓				
		0.1102	"	0.164	✓				
		2.799	"	2.795	✓				
		R.50	±0.03	R.50	✓				
		Ø0.392	±0.002	Ø.3927	✓				
		R.29	±0.03	R.300	✓				
		R.19	"	R.188	✓				
1		1.90	±0.03	1.891	✓				
		1.030	±0.01	1.034	✓				
		0.218	"	0.217	✓				
		0.500	"	0.503	✓				
		0.830	"	0.835	✓				
		3.881	"	3.888	✓				
		4.17	±0.03	4.172	✓				

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Measured by: EC

Audited by: SP

Approved by: CP 03.04.22



## PACKING SLIP

Invoice Number 5004292  
Date 04-15-03  
**Order Entry No 3003593**

From  
Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury Ont  
Canada K6A 1K7

Sold To  
Edwards & Associates Inc.  
PO Box 3689  
Bristol TN  
USA 37625

Ship To  
Edwards & Associates Inc.  
157 Industrial Park Road  
Attn: Dwayne Starnes  
Piney Flats TN  
USA 37686

GST # RT101272607  
Telephone (613) 632-3336  
Fax (613) 632-4443

Attn:  
Customer Tel (423) 538-5111  
Customer Fax (432) 538-8469

Currency : USD  
Customer PO P302-486  
Customer PST/IRS #

Ship Via FEDEX P1 No of Cartons: 1  
FOB Point ORIGIN PrePay No of Pallets: 0  
Release No Tag:

Ordered	Part Number	Part Description	Shipped	Back Order	Unit Price	Extended
1.00	D3183-042	Bracket Assembly	1.00	0.00		

BATCH #B19022

